



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Kenneth A. Robie, P.E.
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Program Development Division
Highway Safety & Design Section
One National Life Drive
Montpelier, VT 05633

RE: Circ-Williston Transportation Project Final Environmental Impact Statement (CEQ# 20100263)

Dear Mr. Robie:

The Environmental Protection Agency-New England Region (EPA) has reviewed the Vermont Agency of Transportation (VTrans)/Federal Highway Administration's (FHWA) Final Environmental Impact Statement (FEIS) for the proposed Circ-Williston Transportation project in Williston and Essex, Vermont. This letter provides our general comments regarding the FEIS and reiterates outstanding objections to FHWA/VTrans' preferred alternative.

EPA had intended to provide one comment letter in response to the FEIS and the Corps of Engineers' August 10, 2010 Section 404 Public Notice, but unfortunately the comment deadlines do not coincide and the FEIS deadline was not extended. Consequently, prior to the Corps' deadline EPA will provide detailed comments regarding impacts to aquatic resources and compensatory mitigation in response to the Public Notice. Our comments on the Corps' Public Notice will be relevant to the NEPA process and we believe that they should be fully considered as FHWA and VTrans work to develop the Record of Decision (ROD) for the project. In addition, since the Corps is a cooperating agency in this NEPA process and intends to rely on it to satisfy its own NEPA obligations, it is important that the ROD be prepared after considering and addressing comments on the Public Notice as well as the FEIS.

EPA has participated as a cooperating agency throughout this combined EIS/404 permit process. EPA commented on the DEIS for the Circ-Williston project in November, 2007, and on the administrative draft FEIS in June, 2010. Our comments have consistently noted the significantly greater environmental impacts of the Circ A/B alternatives

compared to the upgrade options, and the only modest differences between project alternatives in terms of addressing the NEPA project purpose and need, and Section 404 basic project purpose. Our comments have addressed wetland and stream impacts and compensatory mitigation, water resources and storm water, hydrologic impacts, air quality, and indirect and cumulative impacts. These previous comments and FHWA/VTrans' responses to them provided the framework for our review of the FEIS.

Unfortunately, we find that the FEIS is not meaningfully changed from the administrative draft FEIS, and the concerns and objections EPA has consistently raised remain unresolved. The conclusion in the FEIS that, "...*there are no known major unresolved issues related to this FEIS*" (FEIS page 20-1) is both surprising and incorrect.

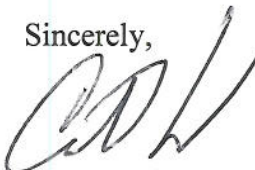
EPA's fundamental concerns about the FEIS and objections to Alternative 17, FHWA/Vtrans' preferred alternative, are as follows:

- The FEIS understates and mischaracterizes the value of the aquatic resources that would be harmed by Alternative 17.
- The FEIS underestimates the severity of impacts from Alternative 17 to aquatic resources and describes mitigation that will not adequately compensate for the functions and values of the wetlands and streams lost or diminished as a result of Alternative 17.
- We continue to disagree with the Army Corps determination that Alternative 17 is the Least Environmentally Damaging Practicable Alternative.
- We continue to disagree with the FEIS's assertions that upgrades to 2A do not meet the basic project purpose and that they are not practicable.

As noted above, EPA will provide detailed comments on these issues in response to the Corps' Public Notice. In addition, concerns we have raised regarding water quality remain unresolved and are summarized in the attachment to this letter. These concerns would need to be resolved should a permissible project be developed. The attachment also addresses the transportation performance of the alternatives.

Based on these factors we believe that Alternative 17 does not qualify for a Section 404 permit. We therefore believe that the ROD should not be issued until these issues are resolved. Please contact Timothy Timmermann (617-918-1025) of EPA's Office of Environmental Review with any comments or questions about this letter.

Sincerely,



Curtis H. Spalding
Regional Administrator

cc: (see following page)

cc list:

Kenneth R. Sikora, Jr., Federal Highway Administration
Robert J. DeSista, U.S. Army Corps of Engineers
Maria Tur, United States Fish and Wildlife Service

Additional Comments on the Circ-Williston Transportation Project Final Environmental Impact Statement

Water Quality

The comments below correspond to the VTrans and FHWA responses to EPA's comments on the Administrative Draft FEIS (provided in Appendix S of the FEIS).

#8) While chloride criteria are not predicted to be exceeded in the Unnamed Tributary to the Winooski River, our point is that levels are predicted to increase substantially and come close to the chronic criterion. And criteria are already exceeded in the Tributary to Muddy Brook, which would be affected by the Route 2A alternatives. A recent analysis by Trowbridge, *et al.* (*Environ. Sci. Technol.*, 2010, 44 (13), pp 4903–4909) found that when average annual chloride levels derived from limited monitoring (comparable to the five weeks of monitoring in 2008) are 102 mg/l or more, the chronic criterion of 230 mg/l is likely to be exceeded during the year. Given the elevated chloride levels found in 2008 in the Tributary to Muddy Brook and predicted (following roadway construction) in the Unnamed Tributary to the Winooski River, we recommend that the ROD include a commitment to conduct additional monitoring of chloride levels for whichever of these waters would be affected by the project. Monitoring should be conducted for two years following completion of construction (November to April) to alert the highway agencies to any need for further action to reduce chloride levels in runoff. Monitoring should include continuous measurements (15-minute interval) of specific conductivity with approved datasondes and bi-weekly chloride grab sampling. EPA requests the opportunity to review and comment on the Quality Assurance Project Plan prior to the commencement of monitoring.

The response's discussion of an analysis of chloride toxicity conducted by the Iowa Department of Natural Resources is confusing. On the one hand, it implies that EPA's recommended chronic chloride criterion is overly stringent. On the other hand, it notes that the criterion is sufficiently protective of aquatic life. In any case, we do not believe the criterion is overly stringent. Please note that a recent comprehensive literature review¹ of this topic by the New Hampshire Department of Environmental Services (NHDES) concluded that EPA's chronic criterion (as well as New Hampshire's criterion – they are the same) is at the appropriate level to protect aquatic life.

#9) VTrans and FHWA indicate that the selected stormwater BMPs will result in some infiltration, although the amount of infiltration is not indicated. The level of infiltration achieved by vegetated buffers and grass swales can vary significantly depending on design and maintenance aspects. The ROD should incorporate commitments to adjust BMP designs and maintenance plans for the project to achieve infiltration/filtration of runoff generated by at least the first inch of rainfall, utilizing practices such as swales

¹ Hazard Identification for Human and Ecological Effects of Sodium Chloride Road Salt. NH Department of Environmental Services, Watershed Management Bureau, Concord, NH. June 6, 2007. The literature review can be found at: <http://www.rebuildingi93.com/documents/environmental/Chloride%20TMDL%20Toxicological%20Evaluation.pdf>

with check-dams incorporated into the shoulder/embankment area along the roadway. This approach is consistent with EPA's 2009 guidance for implementing Section 438 of the Energy Independence and Security Act. EPA reiterates its opposition to constructing the proposed stormwater basins partly in wetland areas as currently depicted in the FEIS. This approach would essentially convert natural wetlands into treatment systems, which would be very difficult to do in a manner consistent with federal law and state water quality standards. Instead, the ROD should explain how the stormwater basins can be constructed in upland areas appropriate for such structures. Preferably, the infiltration/filtration BMPs should be designed such that detention basins are not needed.

#12) While the modeling results in the FEIS suggest that specific water quality criteria will not be exceeded by any of the alternatives, the Circ A/B alternatives' compliance with Vermont's antidegradation requirements is not well demonstrated, particularly in the small watersheds such as Redmond Creek and the Unnamed Tributary to the Winooski River, where existing concentrations of certain pollutants are predicted to nearly double. The ROD needs to ensure that the final design includes sufficient measures to comply with antidegradation provisions. Also, back in 2002, the permit package for the Circ A/B roadway included an acknowledgement that even with state-of-the-art erosion control practices, certain water quality criteria (biological and turbidity criteria) would likely be violated in affected streams during construction (for up to three years), but that these violations were allowed by the limited duration activities provision in Vermont's water quality standards. Now that the limited duration activities provision (which allowed temporary exceedences of criteria) has been removed from Vermont's water quality standards, it is unclear what additional steps (beyond those outlined in the earlier permit package) would be taken to prevent water quality standards violations during the construction phase. The ROD should address this deficiency.

#13) Given that 1 pound of phosphorus can generate 500 pounds of algae in a lake, it is not appropriate to characterize the 38 lbs/yr increase predicted to result from the preferred alternative as "negligible." The record should also note that the modeled increases do not include phosphorus inputs associated with the construction phase, which are difficult to model but are typically substantial.

Although offset projects can effectively negate phosphorus increases from new projects, the FEIS does not contain sufficient information for one to judge whether the proposed culvert replacement project would adequately offset phosphorus increases that will result from the preferred alternative. Also, Chapter 11 of the FEIS lists several categories of possible offset projects, while the response to comments only mentions the culvert replacement project. The ROD should clearly convey what offset project(s) will be implemented, ensure that the selected offset projects are above and beyond any measures that will need to be implemented as a result of other requirements (such as the new Municipal Separate Storm Sewer System permit), and demonstrate that the proposed offset projects are sufficient to completely offset any increases in phosphorus from both construction and post-construction phases of the new road.

Transportation

The following comments address outstanding concerns with the transportation analysis presented in the FEIS. We continue to strongly believe that FHWA/VTrans' own data demonstrate that all of the alternatives meet the basic project purpose, with each alternative performing better on some transportation measures, and less well on other measures. Our previous comments are contained in Appendices Q and S, and we will not repeat them here. As in previous documents, the FEIS concludes that the preferred alternative (Alternative 17) performs well, even when the data do not support such conclusions. Some of these discrepancies are described below.

Intersection Congestion

Alternative 17 does little to improve congestion at intersections on VT 2A. Specifically, Alternative 17 leaves the Five Corners intersection operating under highly congested conditions, with Level of Service E in the am and pm peak periods. Furthermore, other intersections operate at Level of Service D under Alternative 17. By contrast, Alternative 22 greatly improves conditions at Five Corners, to Level of Service B in both the am and pm peak. Alternative 22 also results in Level of Service B at the Industrial Avenue/Mountain View Road intersection in the am and pm peaks. Although Alternative 22 leaves the intersection at Marshall Avenue/Maple Tree Place congested in the pm peak hour, given its excellent performance at other intersections, we continue to believe it is important to investigate whether this alternative could be modified to improve its performance at the Marshall Avenue/Maple Tree Place intersection in the pm peak hour. There is precedent for evaluating such modifications since Alternative 17 was modified during the course of the EIS process.

Roadway Congestion

Alternative 17 leaves at least one roadway segment on VT 2A severely congested in the pm peak. It is the segment between Industrial Ave/Mountain View Road and South Street/River Street. Under Alternative 17 this segment has a volume:capacity ratio (V/C) of 1.43, which is roughly equivalent to LOS F according to the FEIS. It is true that this is an improvement over No Build conditions (V/C of 1.61), but we do not understand how going from LOS F (No Build) to LOS F (Alternative 17) remedies the problem. In addition, Alternative 17 leaves the roadway segment between Marshall Avenue/Maple Tree Place and I-89 operating at a V/C ratio of 1.30, which is only a few vehicles away from being highly congested, which is defined as having a V/C ratio of 1.32. Although Alternative 22 leaves the segment of 2A between South Street/River Street and Industrial Ave/Mountain View Road highly congested in the am and pm peaks (V/C ratios of 1.51 and 1.61, respectively), this is little different from the overall performance of Alternative 17.

Safety

As indicated in the FEIS, Alternatives 22 and 23 are the safest, reducing crashes the most as compared with No Build. The FEIS contains speculation about how and why the VT 2A upgrades will be less safe than VTrans' projections show, but VTrans' data speak for

themselves; Alternative 22 is measurably safer than Alternative 17, producing 10% fewer crashes on VT 2A, as compared with Alternative 17.